AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A visualization processing system (VPS1; VPS2) characterized by comprising:

a computer;

a set of data structures employed as computer components of the computer, the set of data structures defining a vector field, a three-dimensional coordinate space, and a two-dimensional plane; and

a set of computer programs employed as computer components of the computer, the set of computer programs comprising:

a first subset thereof operator for mapping [[a]] the vector field [[(70)]] in [[a]] the three-dimensional coordinate space [[(80)]] to obtain a corresponding sequence of coordinate points; [[points,]]

a second subset thereof operator [[(62)]] for determining an elevation degree [[(A)]] as an aboveground opening [[in]] at a local region of a plane [[(S)]] connecting the sequence of coordinate points; [[points,]]

a third subset thereof operator [[(63)]] for determining a depression degree [[(C)]] as an underground opening in the local at said region of the plane connecting the sequence of coordinate points; [[points,]]

a fourth subset thereof operator [[(64)]] for synthesizing the elevation degree [[(A)]] and the depression degree [[(C)]] in a weighting manner to determine an elevation-depression degree [[(B)]] in the local at said region of the plane connecting the sequence of coordinate points; [[points,]]

a fifth subset thereof operator [[(65)]] for mapping the three-dimensional coordinate space [[(80)]] on [[a]] the two-dimensional plane [[(90)]], providing a tone indication [[(F)]] commensurate with the elevation-depression degree of said region

to a region on the two-dimensional plane corresponding to ~~the local~~ said region
of the plane connecting the sequence of coordinate points; and

a sixth subset thereof for determining an inclination distribution of the plane
connecting the sequence of coordinate points, the fifth subset providing on the two-
dimensional plane said tone indication for a brightness of a color-toned indication of
the inclination distribution.

2.   (Currently Amended) The visualization processing system (~~VPS1; VPS2~~) as
claimed in claim 1, ~~characterized in that~~ wherein the elevation degree [[(B)]] is defined in
terms of a see-through solid angle at ~~one~~ an obverse side ~~in the local region~~ within a range
of the plane connecting the sequence of coordinate points.

3.   (Currently Amended) The visualization processing system (~~VPS1; VPS2~~) as
claimed in claim 2, ~~characterized in that~~ wherein the depression degree [[(C)]] is defined in
terms of a see-through solid angle at ~~the other~~ a reverse side ~~in the local~~ within said range of
the plane connecting the sequence of coordinate points.

4.   (Cancelled)

5.   (Currently Amended) The visualization processing system (~~VPS1; VSP2~~) as
claimed in claim 4, ~~characterized in that~~ wherein the ~~fifth operator (65)~~ sixth subset provides
the color-toned indication [[(F)]] of the inclination distribution [[(D)]] in [[reddish]] red
colors.

6.   (Currently Amended) The visualization processing system (~~VPS1; VPS2~~) as
claimed in claim 1, ~~further characterized by~~ wherein the set of computer programs further
comprises:

a seventh subset thereof operator [[(67)]] for connecting, among the sequence of coordinate points, those coordinate points equivalent of an attribute in the vector field to obtain an attribute isopleth line; [[line (I),]] and

an eighth subset thereof operator [[(68)]] for mapping the attribute isopleth line [[(I)]] on the two-dimensional plane [[(90)]] given the said tone indication [[(F)]].

7.   (Currently Amended) A visualization processing system (VPS1; VPS2) characterized by comprising:

a computer;

a set of data structures employed as computer components of the computer, the set of data structures defining a vector field, a three-dimensional coordinate space, and a two-dimensional plane; and

a set of means employed as computer components of the computer, the set of means comprising:

a first subset thereof means (61) for mapping [[a]] the vector field [[(70)]] in [[a]] the three-dimensional coordinate space [[(80)]] to obtain a corresponding sequence of coordinate points;

a second subset thereof means (62) for determining an elevation degree [[(A)]] as an aboveground opening [[in]] at a [[local]] region of a plane connecting the sequence of coordinate points; [[points,]]

a third subset thereof means (63) for determining a depression degree [[(C)]] as an underground opening in the local at said region of the plane connecting the sequence of coordinate points; [[points,]]

a fourth subset thereof means (64) for synthesizing the elevation degree [[(A)]] and the depression degree [[(C)]] in a weighting manner to determine an elevation-depression degree [[(B)]] in the local at said region of the plane connecting the sequence of coordinate points;[[points, and]]

a fifth subset thereof means (65) for mapping the three-dimensional coordinate space [[(80)]] on [[a]] the two-dimensional plane [[(90)]], providing a tone indication [[(F)]]

commensurate with the elevation-depression degree of said region [[(B)]] to a region on the two-dimensional plane [[(90)]] corresponding to the local said region of the plane connecting the sequence of coordinate points; and

a sixth subset thereof for determining an inclination distribution of the plane connecting the sequence of coordinate points, the fifth subset providing on the two-dimensional plane said tone indication for a brightness of a color-toned indication of the inclination distribution.

8.   (Currently Amended) A visualization processing method characterized by comprising the steps of:

a first step (P1) of mapping a vector field [[(70)]] in a three-dimensional coordinate space [[(80)]] to obtain a corresponding sequence of coordinate points; [[points,]]

a second step (P2) of determining an elevation degree [[(A)]] as an aboveground opening [[in]] at a [[local]] region of a plane connecting the sequence of coordinate points;

a third step (P3) of determining a depression degree [[(C)]] as an underground opening in the local at said region of the plane connecting the sequence of coordinate points; [[points,]]

a fourth step (P4) of synthesizing the elevation degree [[(A)]] and the depression degree [[(C)]]) in a weighting manner to determine an elevation-depression degree [[(B)]] in the local at said region of the plane connecting the sequence of coordinate points; [[points, and]]

a fifth step (P5) of mapping the three-dimensional coordinate space [[(80)]] on [[a]] the two-dimensional plane [[(90)]], providing a tone indication [[(F)]] commensurate with the elevation-depression degree of said region [[(B)]] to a region on the two-dimensional plane [[(90)]] corresponding to the local said region of the plane connecting the sequence of coordinate points; and

determining an inclination distribution of the plane connecting the sequence of coordinate points, providing on the two-dimensional plane said tone indication for a brightness of a color-toned indication of the inclination distribution.

9. (Currently Amended) A computer readable medium encoded with:

a set of data structures employable as computer components, the set of data structures defining a vector field, a three-dimensional coordinate space, and a two-dimensional plane; and

a set of programs employable as computer components for visualization processing, the set of programs comprising: visualization processing program characterized in that the program is functionable to have a computer execute

a first subset thereof process (P1) for mapping [[a]] the vector field [[(70)]] in [[a]] the three-dimensional coordinate space [[(80)]] to obtain a corresponding sequence of coordinate points; [[points,]]

a second subset thereof process (P2) for determining an elevation degree [[(A)]] as an aboveground opening [[in]] at a [[local]] region of a plane connecting the sequence of coordinate points; [[points,]]

a third subset thereof process (P3) for determining a depression degree [[(C)]] as an underground opening in the local at said region of the plane connecting the sequence of coordinate points; [[points,]]

a fourth subset thereof process (P4) for synthesizing the elevation degree [[(A)]] and the depression degree [[(C)]] in a weighing manner to determine   an elevation-depression degree [[(B)]] in the local at said region of the plane connecting the sequence of coordinate points; [[points, and]]

a fifth subset thereof process (P5) for mapping the three-dimensional coordinate space [[(80)]] on [[a]] the two-dimensional plane [[(90)]], providing a tone indication [[(F)]] commensurate with the of the elevation-depression degree of said region [[(B)]] to a region on the two-dimensional plane [[(90)]] corresponding to the local said region of the plane connecting the sequence of coordinate points; and

a sixth subset thereof for determining an inclination distribution of the plane connecting the sequence of coordinate points, the fifth subset providing on the two-

dimensional plane said tone indication for a brightness of a color-toned indication of

the inclination distribution.

10. – 12. (Cancelled)

13. (New)   A visualization processing system compromising:

a computer;

a set of data structures employed as computer components of the computer, the set of

data structures defining a vector field, a three-dimensional coordinate space, and a two-

dimensional plane; and

a set of computer programs employed as computer components of the computer, the

set of computer programs comprising:

a first subset thereof for mapping the vector field in the three-dimensional

coordinate space to obtain a corresponding sequence of coordinate points;

a second subset thereof for determining an elevation degree at a local region

of a plane connecting the sequence of coordinate points in terms of a see-through

solid angle about said local region at an obverse side of the plane connecting the

sequence of coordinate points;

a third subset thereof for determining a depression degree at said local region

of the plane connecting the sequence of coordinate points in terms of a see-through

solid angle about said local region at a reverse side of the plane connecting the

sequence of coordinate points;

a fourth subset thereof for synthesizing the elevation degree and the

depression degree in a weighting manner to determine an elevation-depression degree

at said local region of the plane connecting the sequence of coordinate points; and

a fifth subset thereof for mapping the three-dimensional coordinate space on

the two-dimensional plane, providing a tone indication commensurate with the

elevation-depression degree of said local region to a region on the two-dimensional

plane corresponding to said local region of the plane connecting the sequence of coordinate points.

14.   (New) The visualization processing system as claimed in claim 13, wherein the set of computer programs further comprises:

a sixth subset thereof for determining an inclination distribution of the plane connecting the sequence of coordinate points; and

the fifth subset providing on the two-dimensional plane said tone indication for a brightness of a color-toned indication of the inclination distribution.

15. (New) The visualization processing system as claimed in claim 14, wherein the sixth subset provides the color-toned indication of the inclination distribution in red colors.

16. (New) The visualization processing system as claimed in claim 13, wherein the set of computer programs further comprises:

a seventh subset thereof for connecting, among the sequence of coordinate points, those coordinate points equivalent of an attribute in the vector field to obtain an attribute isopleth line; and

an eighth subset thereof for mapping the attribute isopleth line on the two-dimensional plane given said tone indication.